

THAT WHICH IS CLAIMED IS:

Claim 66: A method of enabling location-independent packet routing in a short-range wireless networking environment, comprising steps of:

providing one or more portable client devices, each of the client devices identified by a constant client address and equipped with a short-range wireless communications capability for communicating in the short-range wireless networking environment;

providing one or more application servers, each of the application servers equipped for communicating over the short-range wireless networking environment;

transmitting a packet from a selected one of the application servers to a selected one of the client devices, wherein the transmitted packet is received at a home agent associated with the selected client device;

forwarding, by the home agent, the received packet to a foreign agent through which the selected client device is currently communicating;

receiving, by the foreign agent, the forwarded packet; and forwarding, by the foreign agent, the received forwarded packet to the selected client device.

Claim 67: The method according to Claim 66, wherein a fixed host is chosen as the home agent associated with the selected client device.

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Claim 68: The method according to Claim 66, wherein an identification of the selected one of the client devices determines which of a plurality of home agents is associated with the selected client device.

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Claim 69: The method according to Claim 66, wherein an identification of a user of the selected client device determines which of a plurality of home agents is associated with the selected client device.

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Claim 70: The method according to Claim 66, wherein a central server is selected as the home agent associated with the selected client device.

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Claim 71: The method according to Claim 66, wherein the step of forwarding by the home agent further comprises the step of consulting a repository to determine through which of a

plurality of foreign agents the selected client device is currently communicating.

Claim 72: A method of enabling location-independent packet routing in a short-range wireless networking environment, comprising steps of:

providing one or more portable client devices, each of the client devices identified by a constant client address and equipped with a short-range wireless communications capability for communicating in the short-range wireless networking environment;

providing one or more application servers, each of the application servers equipped for communicating over the short-range wireless networking environment;

transmitting a packet from a selected one of the client devices to a selected one of the application servers, wherein the transmitted packet is received at a foreign agent through which the selected client device is currently communicating; and

forwarding, by the foreign agent, the received packet to the selected application server.

Claim 73: The method according to Claim 72, further comprising the steps of:

consulting a repository, responsive to receiving the transmitted packet, to determine a network address and port number to be used for identifying the selected client device;

modifying the received packet to use the determined network address and port number in place of a client network address and port number contained therein; and

using the modified packet in the forwarding step.

Claim 74: A method of enabling location-independent packet routing in a short-range wireless networking environment, comprising steps of:

providing one or more portable client devices, each of the client devices identified by a constant client address and equipped with a short-range wireless communications capability for communicating in the short-range wireless networking environment;

providing one or more application servers, each of the application servers equipped for communicating over the short-range wireless networking environment; and

transmitting packets between selected ones of the client devices and selected ones of the application servers using intermediary agents that enable transparent roaming by at least

one of the selected client devices and/or the selected application servers.

Claim 75: The method according to Claim 74, wherein the intermediary agents enable the transparent roaming using address translation of source addresses in outbound ones of the transmitted packets and of destination addresses in inbound ones of the transmitted packets.

Claim 76: The method according to Claim 74, wherein the intermediary agents include a home agent associated with each of the selected client devices.

Claim 77: The method according to Claim 75, wherein at least two of the selected client devices share a particular home agent.

Claim 78: The method according to Claim 77, wherein the particular home agent is a central server.

Claim 79: The method according to Claim 76, wherein the home agent associated with at least one of the selected client devices is determined using administrative policy.

Claim 79: The method according to Claim 76, further comprising the step of dynamically changing the home agent associated with at least one of the selected client devices.

5 Claim 80: The method according to Claim 79, wherein the dynamically changing step occurs responsive to a failure of the home agent associated with the at least one selected client device.

10 Claim 81: The method according to Claim 79, wherein the dynamically changing step further comprises the steps of:

15 dynamically assuming, by a new home agent to be associated with the at least one selected client device, a network address used to identify the home agent that was previously associated with the at least one selected client device; and

20 dynamically updating a repository which records the association of the previous home agent with the at least one selected client device, such that the repository now records the association of the new home agent with the at least one selected client device.

Claim 82: A system for enabling location-independent packet routing in a short-range wireless networking environment, comprising:

5 one or more portable client devices, each of the client devices identified by a constant client address and equipped with a short-range wireless communications capability for communicating in the short-range wireless networking environment;

10 one or more application servers, each of the application servers equipped for communicating over the short-range wireless networking environment; and

15 intermediary agents for transparently transmitting packets between selected ones of the client devices and selected ones of the application servers even though at least one of the selected client devices and/or the selected application servers may roam from one location to another in the short-range wireless networking environment.

Claim 83: Computer program instructions embodied on one or more computer readable media, the computer program instructions adapted for enabling location-independent packet routing in a short-range wireless networking environment and comprising:

computer program instructions for transmitting a packet from a selected one of one or more portable client devices to a selected one of one or more application servers, each of the client devices and application servers equipped for communicating in the short-range wireless networking environment, wherein the transmitted packet is received at a foreign agent through which the selected client device is currently communicating; and

computer program instructions for forwarding, by the foreign agent, the received packet to the selected application server.